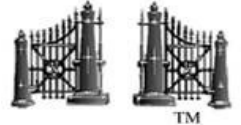


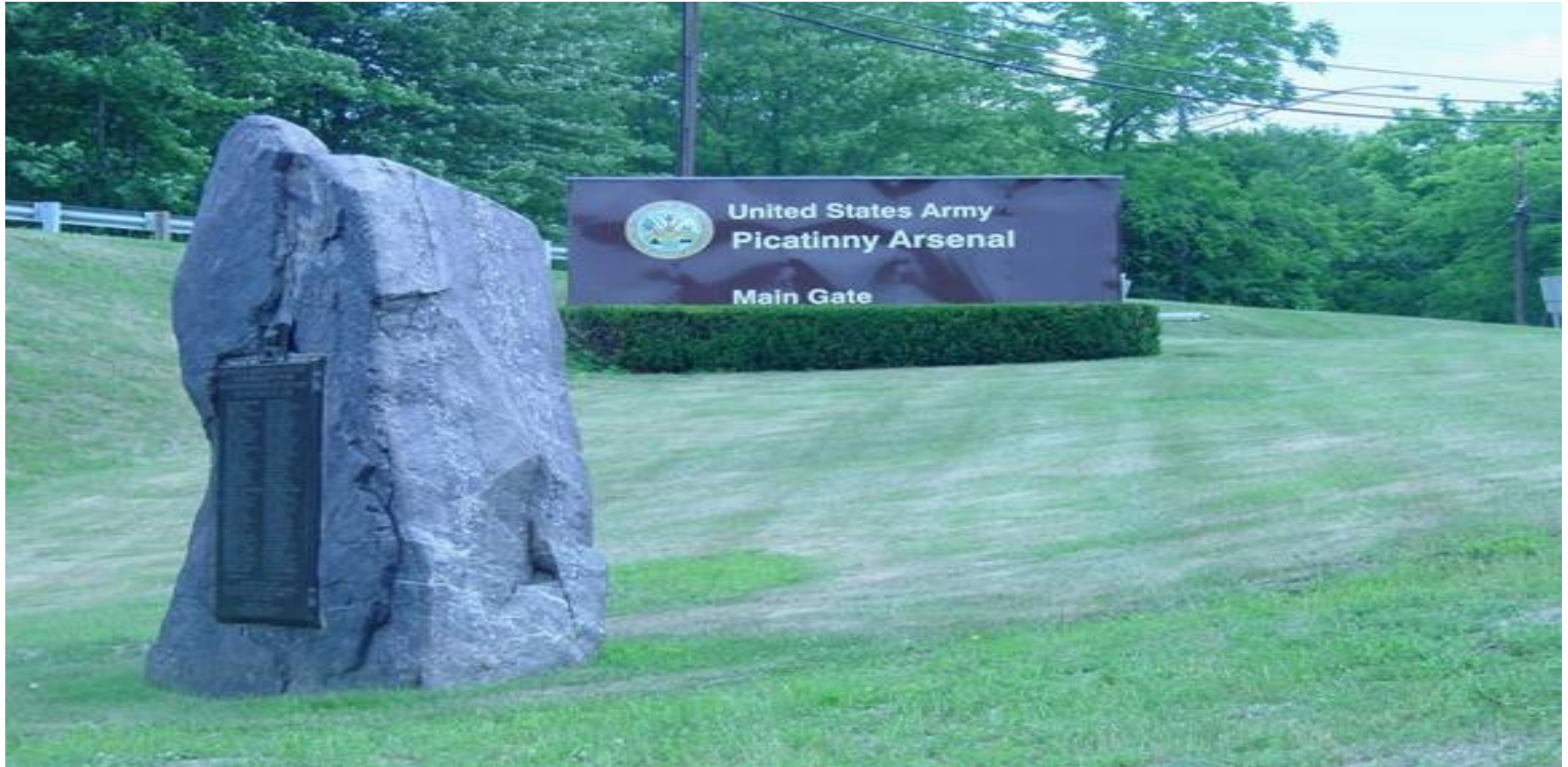


# ARCADIS RAB Presentation June 11, 2014

US Army Garrison



Picatinny Arsenal



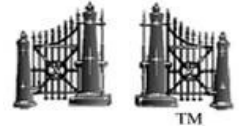


# RAB UPDATE

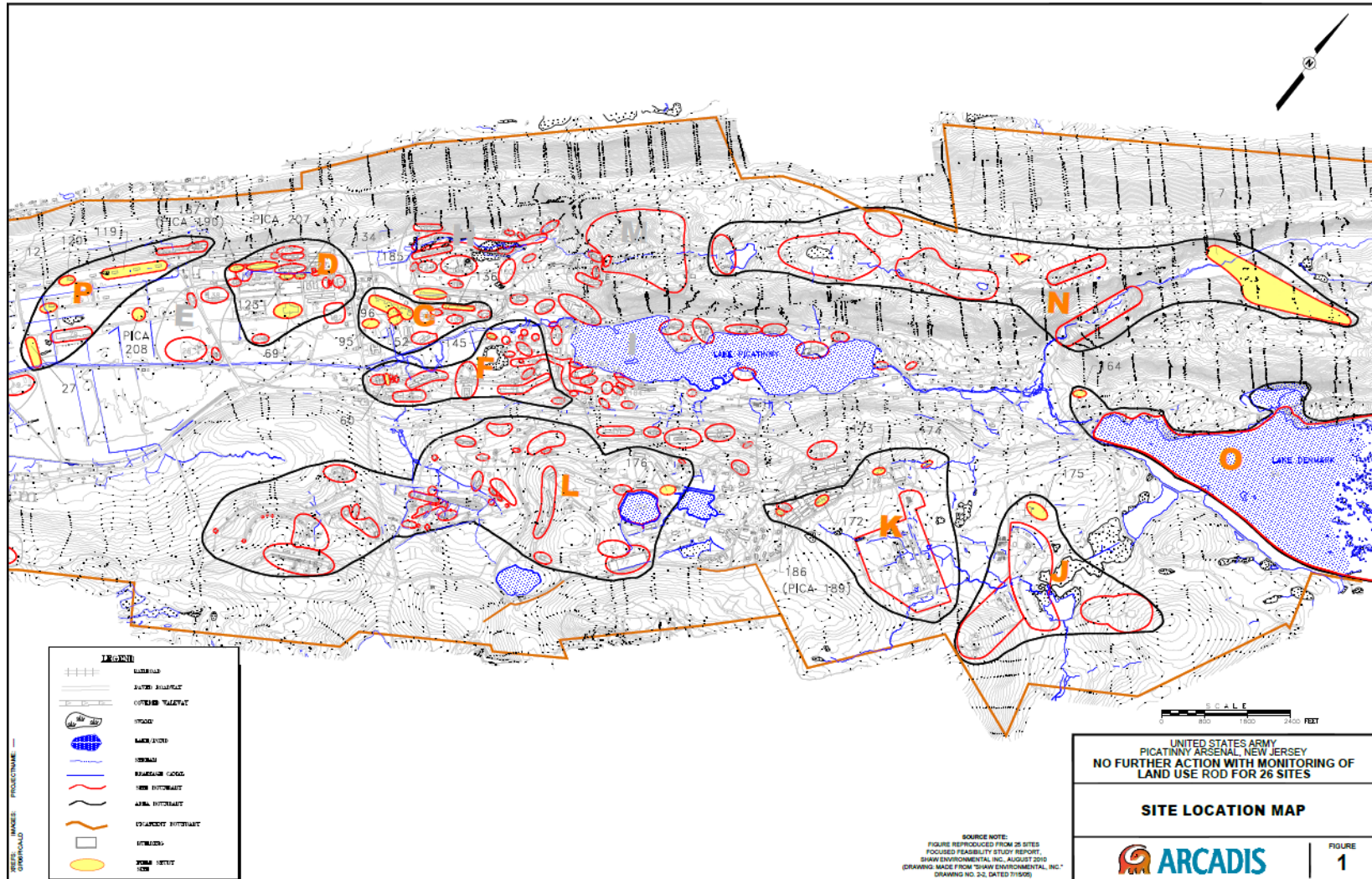
## 26 Site NFA Group (#2)

June 11, 2014

US Army Garrison

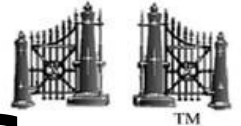


Picatinny Arsenal





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# Status of CERCLA Process

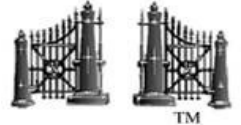
- ✓ Remedial Investigation (Characterization of Site)
- ✓ Feasibility Study (Assessment of possible remedies)
- ✓ Proposed Plan (Public document to solicit input on preferred remedy)
- ☐ Record of Decision (Final legal document selecting remedy)
- ☐ Remedial Action (Implement Remedy)
- ☐ Long Term Operation, Monitoring and Maintenance





# Public Meeting

US Army Garrison



Picatinny Arsenal

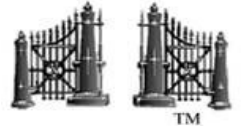
- Public Meeting held on June 11
- Full transcript of the meeting will be made available
- Comments may be submitted during the 30-day comment period (June 2 to July 2 2014)
- Information on how to submit comments provided tonight





# What's Next?

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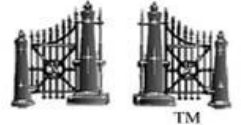
Picatinny Arsenal

- Public Comments will be evaluated and addressed in the Record of Decision (ROD)



# Proposed Plan

US Army Garrison



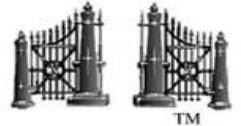
Picatinny Arsenal

- Hard copies of the Proposed Plan and electronic copies of other documents are available for review at:
  - Rockaway Township Library (973) 627-2344  
61 Mount Hope Road  
Rockaway Township, NJ 07866
    - Mon. - Fri. 9 am - 9 pm
    - Sat. 9 am - 5 pm
    - Sun. 1 pm - 4 pm
  - Morris County Library (973) 285-6930  
30 East Hanover Avenue  
Whippany, NJ 07981
    - Mon. - Thur. 9 am - 9 pm
    - Fri. - Sat. 9 am - 5 pm
    - Sun. noon - 5 pm



# Public Comment Period

US Army Garrison



Picatinny Arsenal

- Written comments accepted until July 2 2014
- Send to  
Mr. Ted Gabel  
IMPI-PWE  
Environmental Affairs Division Building 319  
Picatinny, NJ 07806
- Email to  
[ted.b.gabel.civ@mail.mil](mailto:ted.b.gabel.civ@mail.mil)



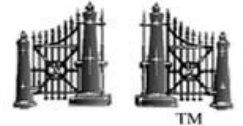


# RAB UPDATE

## Lower Burning Ground Remedy

### June 11, 2014

US Army Garrison



Picatinny Arsenal

Lower Burning Ground, Picatinny  
Arsenal, NJ  
(subbase construction on June 3, 2014)



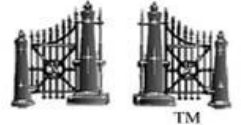
Maywood Solar Farm, IN  
(largest solar farm constructed on a  
Superfund Site)





# PICA 002 (Site 34 Former Lower Burning Ground)

US Army Garrison



Picatinny Arsenal

- ROD signed 2005
- Final ESD planned May 2014. Noticed June 2014
- GW monitoring implemented in Q1 2014
- RIP by July 2014
- RAR by September 2014
- LUCs and Annual Certification by December 2014
- 2015 and Beyond: Annual Inspections (LUC, SW, and Wetland), Mowing, monitoring (metals) and reporting
  - 2015 - Quarterly GW monitoring /reporting
  - 2016 & 2017 - Semi Annual GW monitoring/reporting
  - 2018 and beyond - Annual GW monitoring/reporting



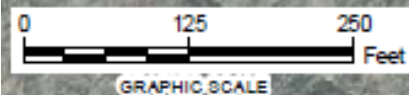
## Asphalt Cap:

1. Caps most contaminated area
2. Caps 11 highest lead concentrations
3. Caps the highest dioxin/furan concentration
4. Located next to (and upgradient of) the 3 wells with MCL exceedances

	<u>Asphalt Cap</u>	<u>Soil Cover</u>
Max. lead conc.	15,800	1,590
Ave. lead conc.	2,405	527
Concentrations in mg/kg (ppm)		



Bio Retention Pond



GRAPHIC SCALE



# Mitigation Areas



September 2013



Ground application of herbicide

March 2014



Mowing of Dead Phragmites (invasive)



Facing south. Soil cover subbase on left.  
Bio retention pond in background.





Facing southeast. Soil cover subbase.





# Bio retention pond





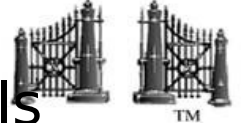
# Wetland Mitigation Area 1.







US Army Garrison



Picatinny Arsenal

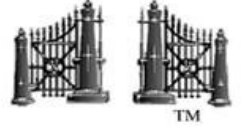
# Site Controls and Erosion and Sediment Controls







US Army Garrison



Picatinny Arsenal

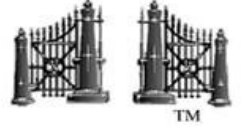
# Building Demolition







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Picatinny Arsenal

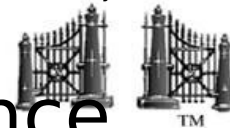
# Subbase Preparation







US Army Garrison



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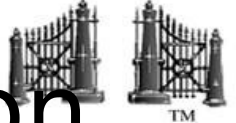
# UXO Construction Support and Clearance







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Picatinny Arsenal

# Stormwater Pond Construction

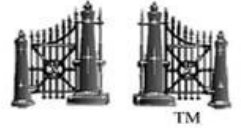






# Wetland Mitigation Plants (13,000 of them!)

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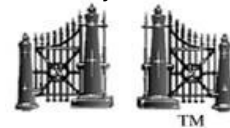






# Wetland Mitigation

US Army Garrison



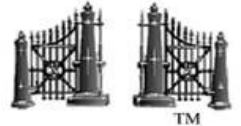
Picatinny Arsenal





# PICA 002 (Site 34 Former Lower Burning Ground)

US Army Garrison



Picatinny Arsenal

- What's Left?
  - Complete stormwater features and subbase
  - Place geotextile separation layer
  - Place 18" clean soil cover
  - Place 6" clean soil cover and asphalt
  - Complete earthwork and planting at Mitigation Site #1
  - Site Restoration and Demobilization

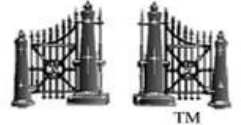


# RAB UPDATE



## 48 Site NFA Groups

### June 11, 2014

US Army Garrison




Picatinny Arsenal






DRAFT No Further Action with Monitoring of Land Use Proposed Plan for Areas D, H, J, K, M, and P Sites

U.S. Army Garrison  
Picatinny Arsenal,  
New Jersey

May 2014






DRAFT No Further Action with Monitoring of Land Use Proposed Plan for Areas F, G, I, and L Sites

U.S. Army Garrison  
Picatinny Arsenal,  
New Jersey

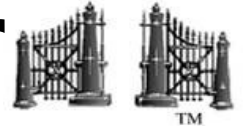
May 2014





# FS Split Into Two Groups for PP

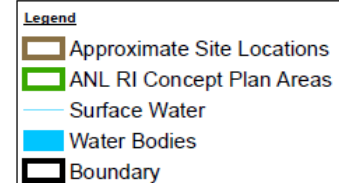
US Army Garrison



Picatinny Arsenal

Areas D, H, J, K, M  
and P  
24 Sites

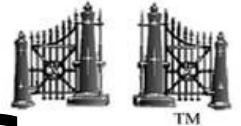
Areas F, G, I,  
and L  
24 Sites







US Army Garrison



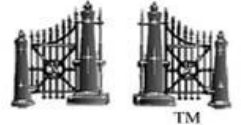
# Status of CERCLA Process

- ✓ Remedial Investigation (Characterization of Site)
- ✓ Feasibility Study (Assessment of possible remedies)
- ☐ Proposed Plan (Public document to solicit input on RI/FS and PP)
- ☐ Record of Decision (Final legal document selecting remedy)
- ☐ Remedial Action (Implement Remedy)



# Site Information

US Army Garrison



Picatinny Arsenal

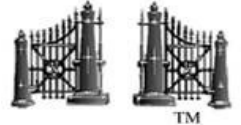
- The 48 former military/industrial sites are scattered throughout the Arsenal and range in size from less than an acre to several acres
- Some are no longer active and some of the structures have been demolished





# Area F, G, I, and L Included Sites

US Army Garrison



Picatinny Arsenal

## Area F Sites

- Site 111, Buildings 454 & 455 Propellant Bag Filing Area
- Site 126, Building 197, Propellant Testing
- Site 138, Buildings 404, 407 & 408, Chemical Lab & Propellant Plant
- Site 139, Building 424, Propellant Processing Plant
- Site 140, Buildings 427 and 427B, Propellant Processing Plant
- PICA Site 209, Building 167, Locomotive Area, Building 430

## Area G Site

- PICA Site 210, Building 321, Former Storehouse\Currently Administration Offices

## Area L Sites

- Site 5, Shell Burial Area near Building 3150
- Site 6, Shell Burial Area near Building 3100
- Site 36, Building 3100, Hazardous and Non-Hazardous Waste Storage Area
- Site 188, Building 3173, Former Coal Storage Area
- PICA Site 200, Area L Other Buildings

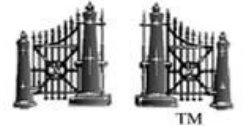
## Area I Sites

- Site 30, Building 3045, Fluorochemical Storage
- Site 47, Buildings 3005 and 3006, Heavy Equipment Maintenance
- Site 70, Buildings 3028 and 3029, Research and Development Laboratory and Chemical Storage Area
- Site 71, Building 910, General Purpose Laboratory
- Site 79, Building 3013, High Pressure Boiler
- Site 82, Building 908, X-ray Photoprocessing Laboratory
- Site 83, Physical Analysis Laboratory for Energetics
- Site 90, Building 329, Electromagnetic Gun Test Shed
- Site 102, Building 3050, Former Enlisted Men's Barracks
- Site 137, Building 382, Administration Building
- Site 158, Building 926, High-Explosive Magazine
- Site 159, Former Building 975, Supplies and Services Administration Building



# Area D, H, J, K, M and P Included Sites

US Army Garrison



Picatinny Arsenal

## Area D Sites

- Site 29, Yard Drum Storage Area (Building 31 Yard)
- Site 45/39, Vehicle Maintenance (Building 33) and Former Waste Water (WW) Pretreatment Facility (Building 31)
- Site 122, Building 60 Satellite Waste Accumulation Area

## Area H Sites

- Site 55, Buildings in 200 Area
- Site 62, Building 210, Former Hazardous Waste Storage Facility/Fuse Assembly
- Site 64, Building 241, Loading/Disassembly Plant
- Site 98, Building 268, Mine Assembly Facility
- Site 100, Building 276, Explosives Loading Facility
- Site 127, Building 230, Melting Casting Operation
- Site 128, Buildings 235/236, Explosives Pressing Plant
- Site 129, Building 240, Change House
- Site 130, Building 252, Powder Press /

## Area J Sites

- Site 1, Naval Air Rocket Test Station, Test Area G
- Site 2, Buildings 3500 through 3551, Reaction Motors, Rocket Test Areas A, B, and C
- Site 4, 3600 Series Buildings, Test Areas D and E

## Area K Site

- Site 3, Former Reaction Motors/ Rocket Fuel Test Area, 1500 Series Buildings

## Area M Sites

- Site 115, Building 611, Ammunition Testing Facility
- Site 151, Building 600 Change House
- Site 152, Building 604 and 604C, Ordnance Facilities
- Site 153, Building 606, Electronics Lab and Storage Building 185
- Site 154, Buildings 617 and 617G, Field Office and Disassembly Facility

## Area P Site

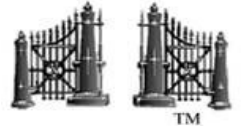
- Site 78, Building 91, Optics Prototype Facility





# Site Information

US Army Garrison



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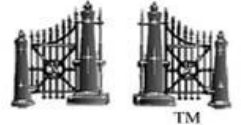
## Site use included:

- Munitions Loading and Manufacture (17)
- Storage Facilities (9)
- Laboratory/Testing Facilities (8)
- Military/Industrial Buildings (8)
- Machine and Maintenance Shops (2)
- Shell Burial Area (2)
- Former magazines (1)
- Former Barrack (1)



# Environmental Investigations

US Army Garrison



Picatinny Arsenal

- Qualitative and/or Quantitative Human Health and Ecological Risk Investigations have been completed for all 48 Sites
- Environmental media (soil, sediment, surface water) have been analyzed
- Groundwater at many of these 48 Sites is addressed as part of the Area D Groundwater ROD (USEPA, 2004), Mid-Valley Groundwater ROD (USEPA, 2012), Group 3 ROD (USEPA, 2010), PICA 13 ROD (USEPA, 2011)
- Site-specific examples are provided tonight





Site  
209

Site  
140

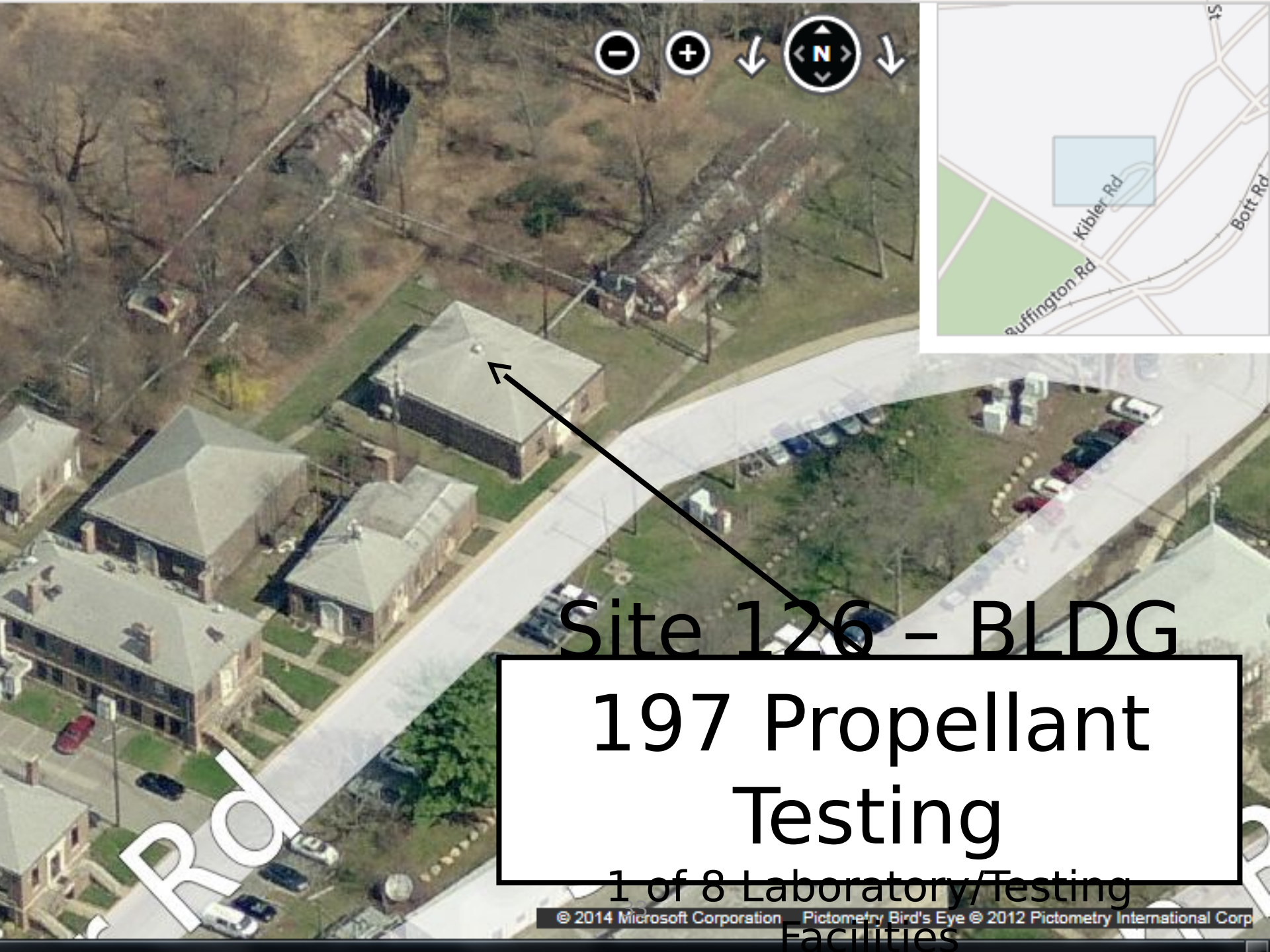
Site  
139

Site  
111

Site  
126

Area F (6 Sites)





Site 126 - BLDG

197 Propellant  
Testing

1 of 8 Laboratory/Testing

Facilities





Site 111 - BLDGs 454 and  
455 Propellant Bag Filling  
Area

1 of 17 Munitions Loading and  
Manufacture



Site 36

Mid Valley Treatment  
Lines



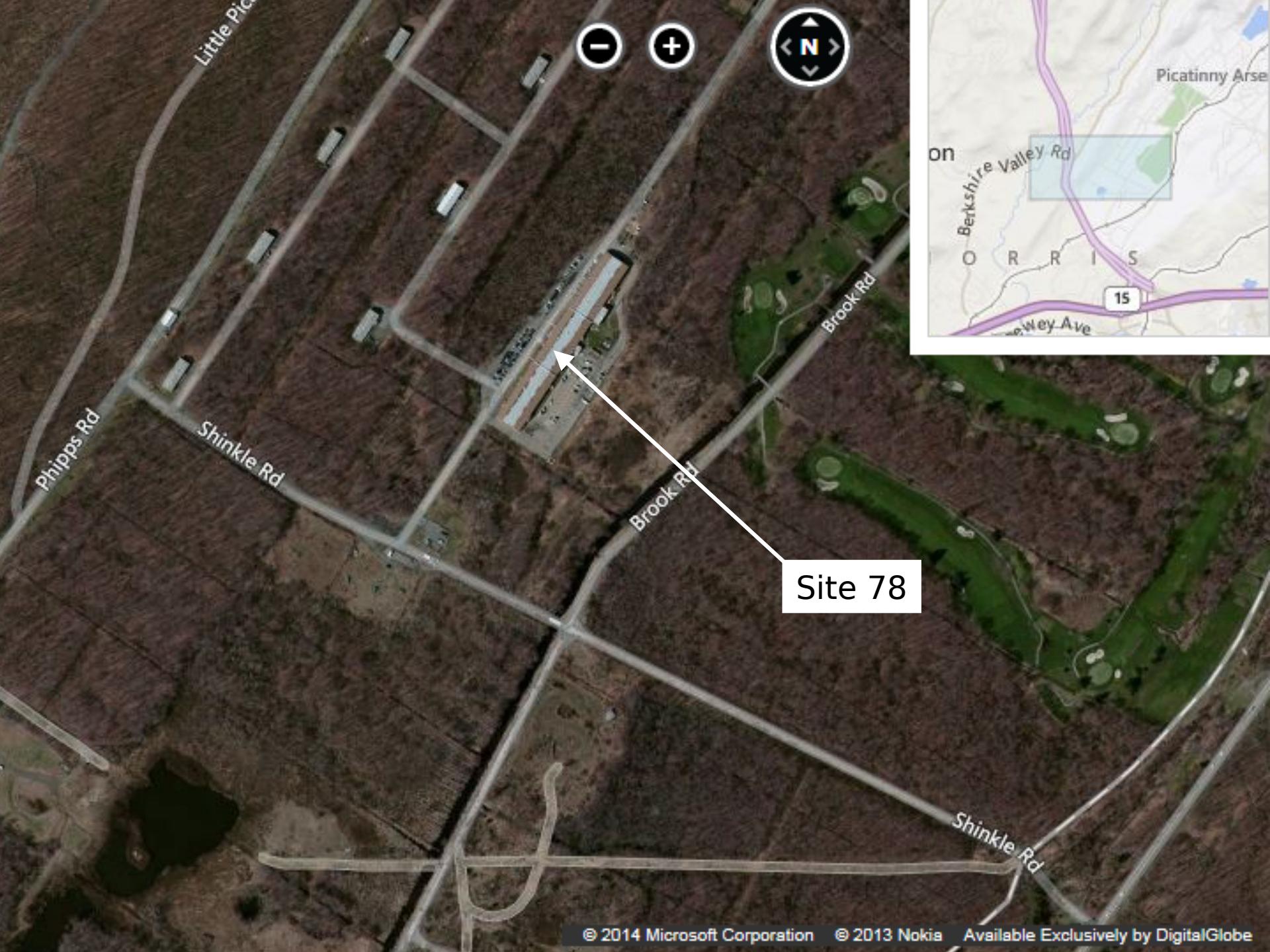


**Site 36 - BLDG 3100**  
**Hazardous and Non**  
**Hazardous Waste Storage**  
**Area**

1 of 9 Storage Areas/1 of 2 site

proposed for unrestricted use





Little Pic



Phipps Rd

Shinkle Rd

Brook Rd

Brook Rd

Shinkle Rd

Site 78





Site 78 – BLDG 91

Optics Prototype  
Facility

1 of 8 Military/Industrial  
Sites

GW ROD in place (USEPA,  
2011)

# Recommended Action

## 46 Sites:

- No Further Action with Monitoring of Land Use. Annual Reporting to USEPA (and NJDEP) verifying that the land use has remained the same.
- Picatinny has controls in place as components of regular facility operations, which prevent unrestricted use.

## 2 Sites:

- No Further Action with unrestricted use.
- Annual reporting is not required for these sites.

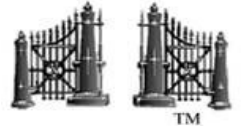
The application of CERCLA vs. NJDEP will also apply to these sites





# Path Forward

US Army Garrison



Picatinny Arsenal

- Many of these sites are similar to the sites discussed at tonight's public meeting
- Draft Final Feasibility Study is complete. Final needs to be issued.
- Draft Proposed Plan is prepared
- Public Meeting will be scheduled Late Summer 2014

Thank You